



BICYCLE & TRANSIT INTEGRATION

Dan Suraci, AICP
TransPro Consulting



BICYCLE AND TRANSIT INTEGRATION
 A PRACTICAL TRANSIT AGENCY GUIDE TO BICYCLE
 INTEGRATION AND EQUITABLE MOBILITY

APTA Standards
 Development Program
 Lead the Way

ESTABLISHING A DIALOGUE ON BICYCLE INTEGRATION

Meeting the needs of multimodal commuters does not begin or end with the installation of bike racks at transit facilities and onboard transit vehicles. Transit agencies should proactively facilitate and promote the use of bicycles for first/last-mile travel to and from their facilities. Empowering transit customers to bike the first and last mile requires clear communications with riders to not only promote, but also educate and inspire. Internal conversations on bicycles are critical to success, both to educate employees and to drive demand instead of playing catch-up to demographic trends. Both internal and external promotion are key.

Internal Dialogue
 Internal organizational culture could potentially be a barrier to expedited strategies for facilitating cycling. Operational issues in particular may prompt opposition from some internal stakeholders. It is critical that agencies ensure that communication about bike use is disseminated at all levels of staff to articulate the context and justification for bike use.

- Identify an internal executive-level champion to advocate for bicycle improvements.
- Develop an internal, cross-disciplinary bicycle advisory group that consults on all transit integration.
- Leverage other bicyclists at the agency, including operators who bike, to spread the word about the benefits of bicycling for customers and for the agency. Deconstruct perceived barriers that commonly oppose these efforts.
 - Data is critical, especially for mitigating operations and maintenance concerns.
 - Precedent and peer agency experience, such as the case studies contained in this document, can be a valuable resource.
- Keep customer service informed on all bicycle improvement projects and concerns. This includes the following:
 - Modifications made at facilities for cyclists
 - Service impacts that will affect cyclists
- Construction project staff must think proactively about how their work may affect all users, including bicyclists, and use the proper channels to communicate those impacts.
- Communicate bicycling as part of the agency's wellness program impacts.
- Provide secure bicycle parking, showers and lockers.

External Dialogue
 Frequent, targeted communication that is informed by data (order feedback, numbers, specific challenges) allows agencies to more precisely tailor their bicycle strategies. In

addition to technical requirements, complex bike parking systems also require a marketing strategy to facilitate use. This may include the following:

- A brochure for bicyclists that is distributed on vehicles, through customer service, public events and other venues
 - Social media
 - Bicyclist wayfinding signage, showing nearby bike routes
 - A robust website with an area for bicyclists that provides pertinent information about bicycle and transit use, policies and procedures
 - A bicycling-specific email address that's monitored by customer service and/or bicycle program staff, such as bicycling@metrobus, to swiftly respond to bicycle-related concerns
- Agencies must adequately budget for communications activities. Transit agencies should work with local advocacy groups to develop consistent messaging and to ensure that transit understands and meets the needs of the bike community.

CASE STUDY
EMPLOYEE ENGAGEMENT



- Each May for Bike Month, Sound Transit staff and consultants are invited to commute to work by bicycle for a fun competition. All abilities are encouraged. To promote cycling, Sound Transit Bicycle Program does the following:
- Promotes an "Unofficial Bicycle Commuter Handbook" that's updated each year and made available to staff. It provides advice on bicycles, clothing, weather, route finding and other useful information.
 - Promotes a "Bike Buddy" map on Google Maps and asks experienced cyclists to volunteer to help less experienced ones with route planning. Employees can look on the map, find a co-worker who lives near them, and seek their guidance or company during their first few rides to and from work.
 - Holds a "How to Lock Professional After Cycling to Work" brown-bag lunch where experienced cyclists speak about the tools and tricks they use to arrive at their desks fresh as a daisy.
 - Takes staff on a lunchtime field trip to a nonprofit bike shop to learn about how to shop for a bicycle.
 - Maintains an internal web page about bicycling to work, which is updated throughout Bike Month.
 - Holds a lunchtime bike repair clinic to teach basic bicycle maintenance.

CASE STUDY
BART STATION ACCESS HIERARCHY

BART developed this Station Access Investment Framework to prioritize investment by station type and mode. Priority projects that best achieve policy goals focus on safety and sustainability are primary investments. In these instances, BART will prioritize investments of funds and staff time, consistent with access goals and priority projects.

STATION TYPE	PRIMARY INVESTMENTS	SECONDARY INVESTMENTS	ACCOMMODATE	NOT ENCOURAGED
URBAN				
URBAN WITH PARKING				
BALANCED INTERMODAL				
INTERMODAL/AUTO RELIANT				
AUTO DEPENDENT				



PILOT PROGRAMS

Small-scale pilot projects are a great way to test ideas and assess feasibility. Policy makers are likely to be supportive and less apprehensive about a pilot project versus a full-scale implementation because they provide a controlled environment in which to test new ideas. Documentation and evaluation are critical components of pilot projects, as the analysis and to build a foundation for expanding bicycle projects on a broader scale across the transit agency.

CASE STUDY
TTC BIKE TREE DEPLOYMENT

In 2015, the Toronto Transit Commission (TTC) installed bicycle repair stops (toolkit, pump, and stand or wheel lock) at 10 stations across the city as a one-year pilot. A survey was distributed via the agency's website and social media to gain customer feedback. The response was overwhelmingly positive. As a result, bicycle repair stops were expanded to 30 stations with plans to add an additional 20 the following year, covering about 70 percent of the system.



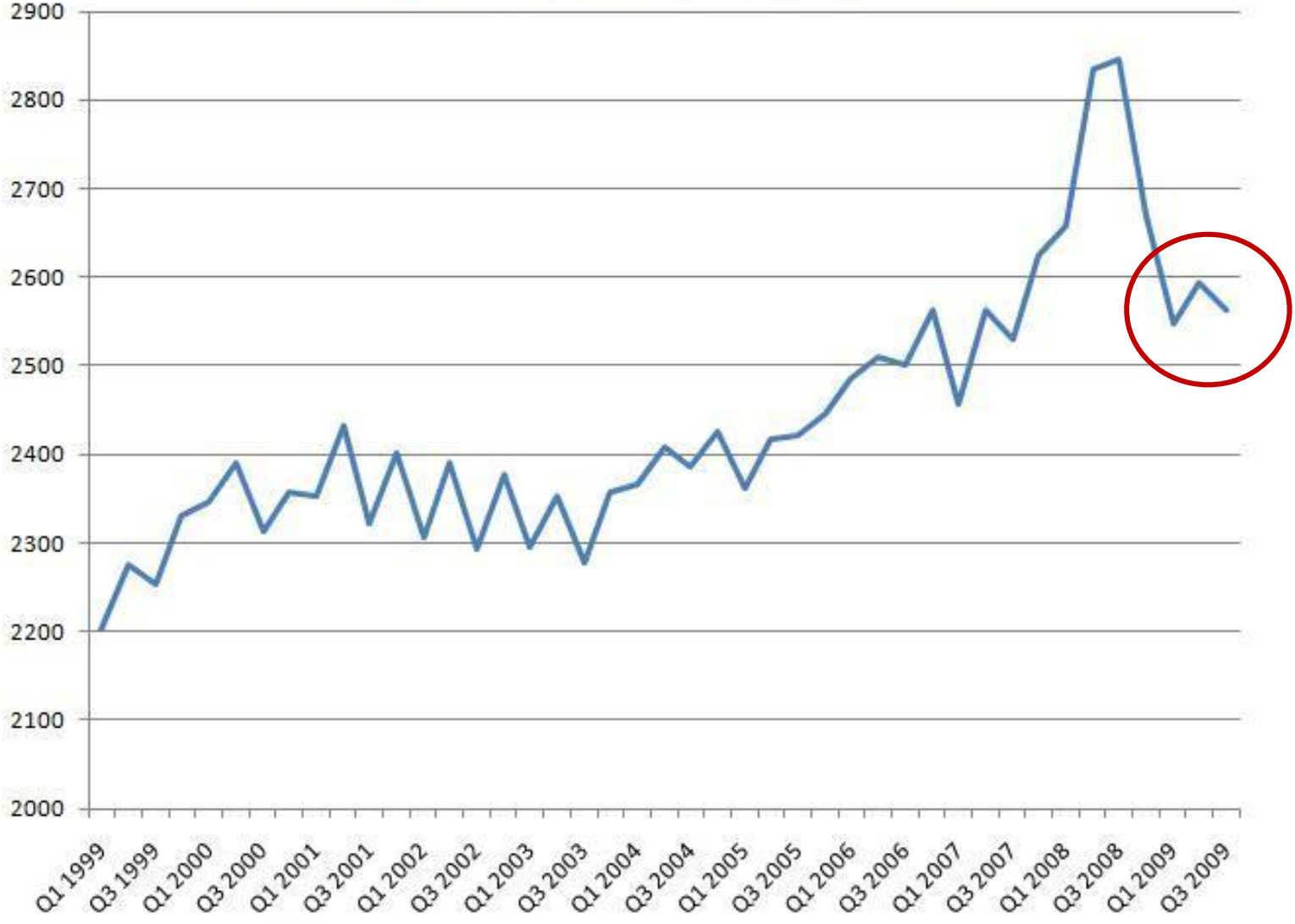
WHY INTEGRATE BIKES & TRANSIT?



The Usual Suspects...

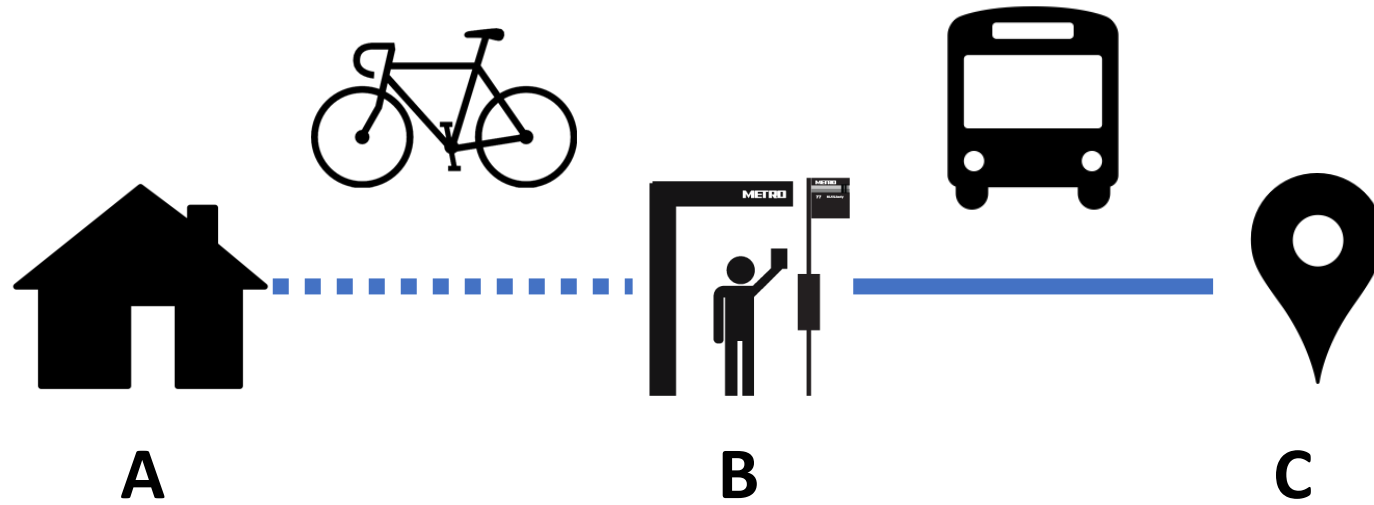


National Transit Ridership (in thousands)



SOURCE: American Public Transportation Association

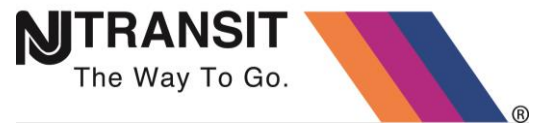
Extend the Reach of Transit



Reduced Demand for Parking



Cause Everybody's Doin' It!



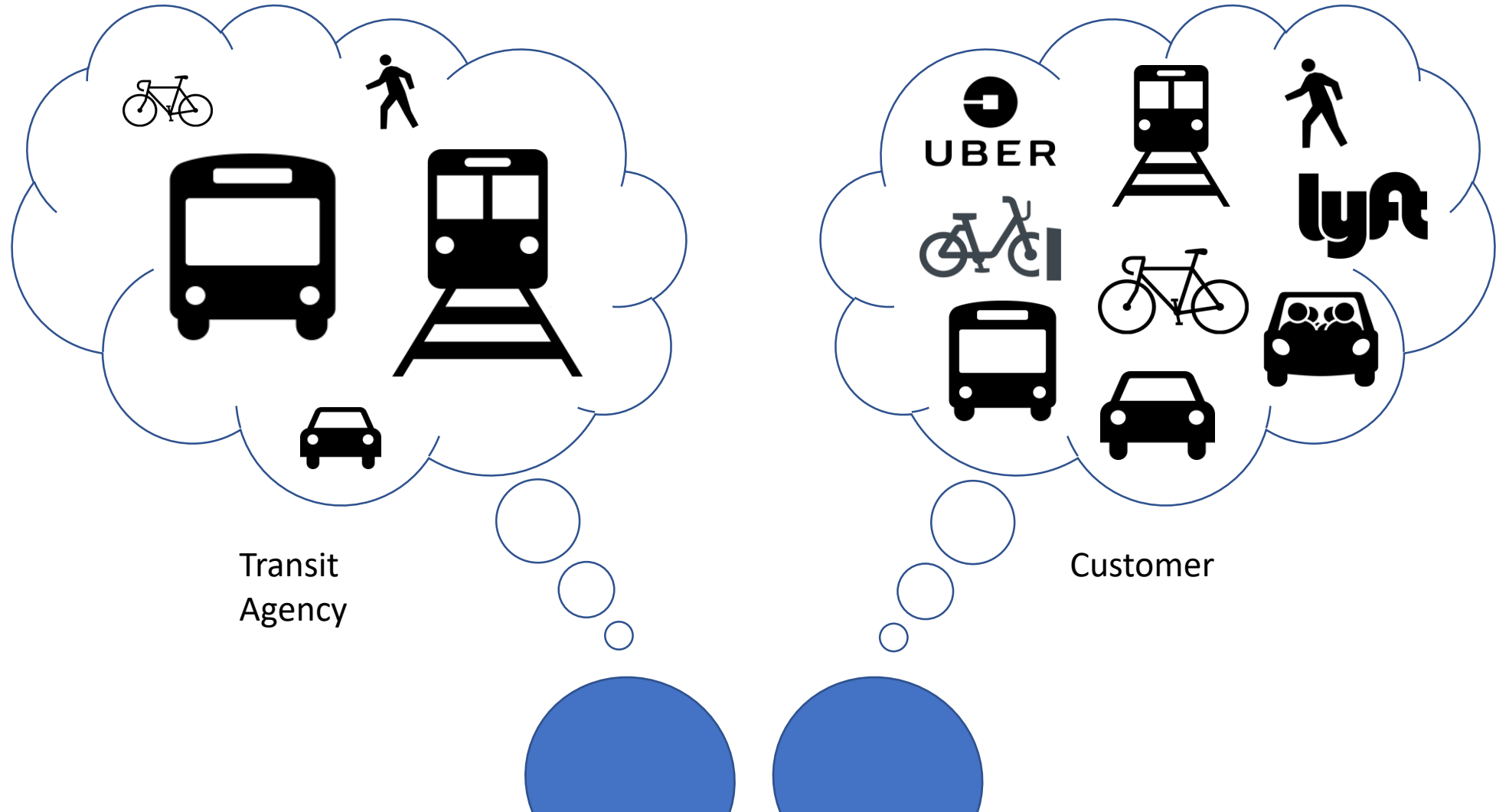
LAYING THE GROUNDWORK



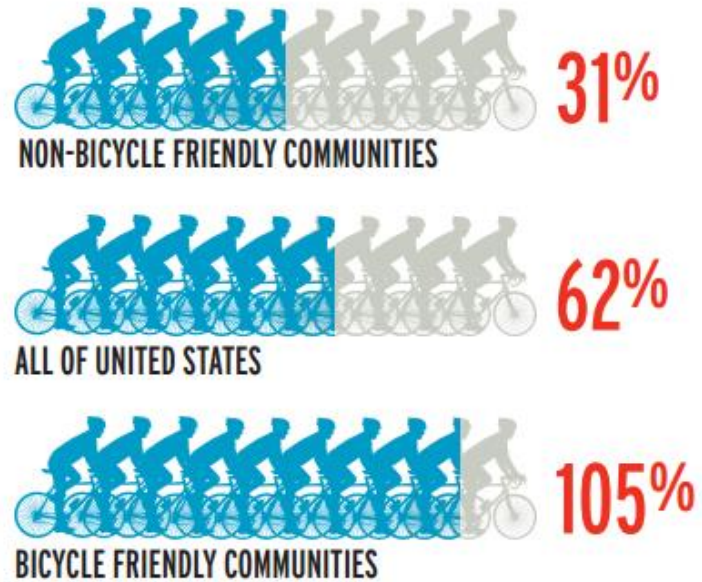
The Core Issues



Transit Agency Priorities vs Customer Choice



Growing Industry Dataset



BFC and non-BFC numbers based on sample of 70 largest cities



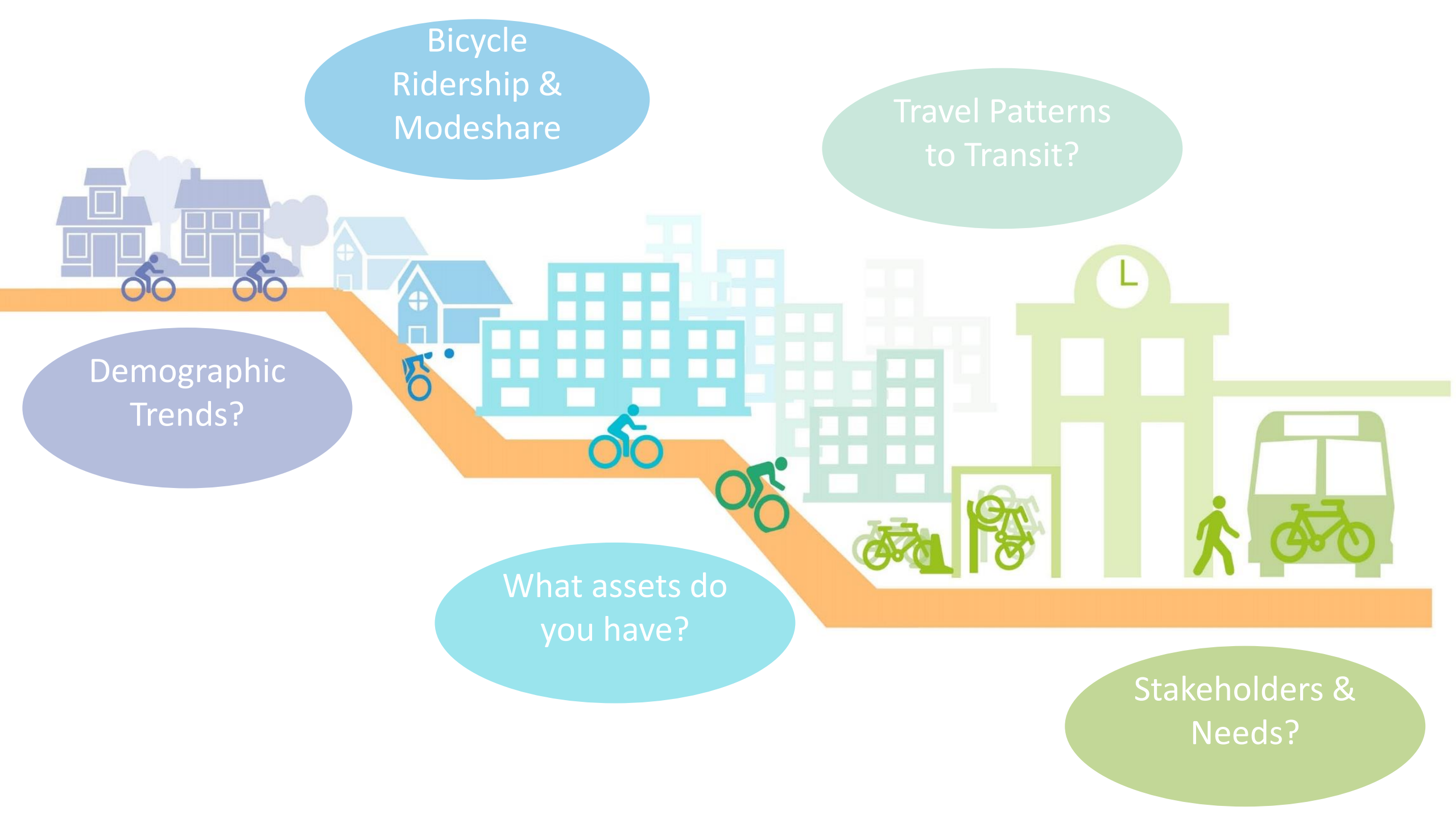
Bicycle
Ridership &
Modeshare

Travel Patterns
to Transit?

Demographic
Trends?

What assets do
you have?

Stakeholders &
Needs?



Guide Highlights



Getting Started

AGENCY AND PARTNER ROLES

Transit agencies often have limited jurisdiction outside their immediate property and right-of-way. The inter-agency nature of bicycle integration with transit requires an understanding of core issues grounded in customer concerns, coupled with a roadmap of the dynamic, complementary roles and responsibilities that may involve numerous stakeholder groups. In addition to the transit agency, stakeholder groups involved in bicycle and transit integration projects may include the following:

Nontransit Public-Sector Partners

These partners may include metropolitan planning organizations (MPOs), municipal governments and local departments of transportation (DOT) or public works (DPW), county governments and state governments/DOTs. Transit projects often require collaboration with a municipal DOT for projects that fall outside of an agency's property. Other agencies such as MPOs may require inputs for broader transportation plans throughout an entire region. Additional partners may include schools and other higher-education institutions, the federal government, multijurisdictional authorities, park boards and airport commissions.

Bike/transit Advisory Groups

Local bike coalitions, advocacy organizations and transit advisory groups can provide valuable insights into customer needs and can help gain access to populations at the grassroots level. Advocacy groups are an avenue for presenting bike/transit integration ideas directly to executives and management. This may also include transportation management areas (TMAs).

Private-Sector Partners

Private entities can include small businesses, developers and employers. These stakeholders can serve as valuable partners, providing funding, land access and other resources. In some cases, particularly with developers, bike integration can be leveraged as an abatement tool to facilitate projects that benefit the public.

Customer Concerns

"How do I get to transit via bicycle?"

"What do I need to know?" "Where can I find information about biking to transit?"

"Is there a safe place to store my bicycle?"

"Can I extend my transit ride with a bike?" "How do I complete my trip by bike at both ends?"

"Can I get to transit without using my own bike?"

Technical Issue

Safe routes to transit

Customer communication and education

Bike parking at or near transit facilities

Bikes onboard transit vehicles

Bike-share connectivity

Partners and Roles

TRANSIT AGENCY

Influencer role; communicate customer demand to municipal authority; act as funding partner; provide policy support where possible

Lead role; provide central repository with clear information on using bikes with agency services, facilities and incentives

Lead role; responsible for design, implementation, maintenance and administration of bike parking at transit stations

Lead role; responsible for operations, policy and administration

Varies; where feasible, work with bike-share operators to ensure clear rules for dockless bikes and efficient placement for stations

PUBLIC SECTOR

Lead role; responsible for planning, implementation and maintenance of facilities; data sharing

Lead role; provide accessible information on the bicycle network as it relates to transit facilities; includes wayfinding and route maps

Varies; provide demand data for bike parking; leads construction; ensures interoperability with bicycle parking if possible; establishes bike parking standards in land-use code

Support role; should communicate customer demand to transit agencies; provide data about facility use

Varies; municipalities overseeing planning for bike share should work proactively to ensure adequate capacity at transit stations

PRIVATE SECTOR

Varies; developers may fund bike paths as an abatement and/or amenity in conjunction with development projects

Support role; employers may provide incentives for biking to work and use existing educational materials to illustrate resources

Varies; provide information and incentives for using bike parking; can build own bike parking facilities if near transit

Support role; incentivize and encourage bicycle integration with transit; communicate customer demand to transit agencies

Varies; may fund bike-share programs through sponsorship and advertising; may provide incentives for using bike share

ADVOCATES

Influencer role; advocate for better bike facilities and connectivity throughout the bike network; help identify demand, balanced with other mode advocacy

Lead role; provide grassroots messaging to underserved populations; incorporate transit resources into educational materials; provide translations; support events; provide amenities such as parking and showers

Varies; some advocacy groups may be contracted for operations of bike parking; advocates should otherwise provide information for users

Influencer role; provide information to the community; communicate customer needs

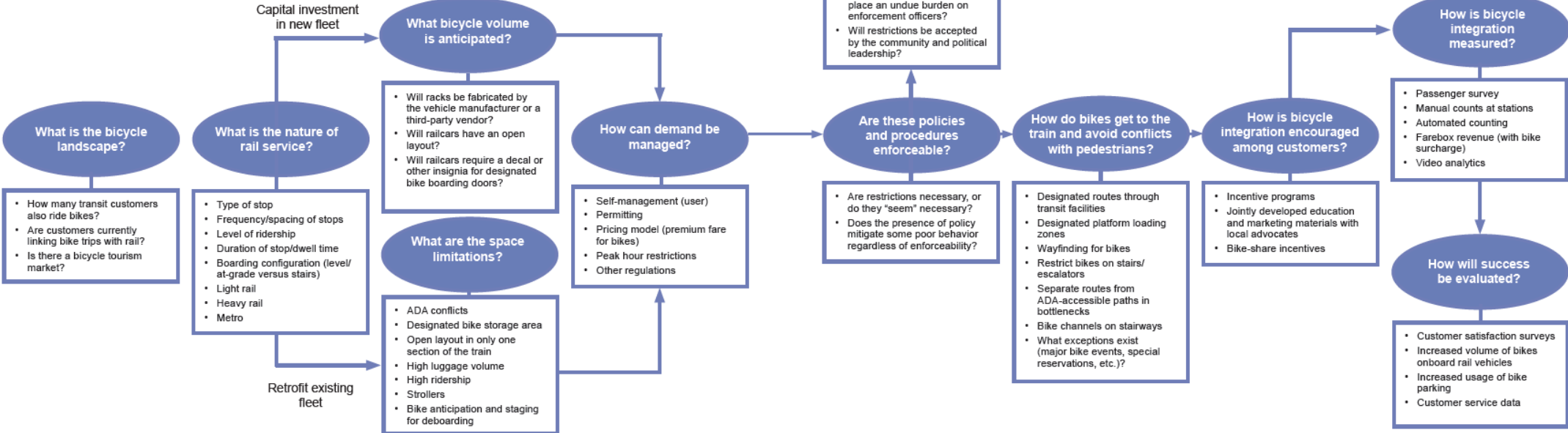
Influencer role; promote the use of bike share at the grassroots level and provide education on bike-share resources; work with providers on discounted use and access for unbanked users

Decision-Making Framework

BIKES ON TRANSIT BIKES ON RAIL: APPROACH TO DECISION-MAKING

The fixed nature of rail systems emphasizes the need for radial connections on alternate modes for the first and last mile of travel. Absent other transit options, bicycle transportation is an efficient means to extend the rail commute, and onboard storage gives users the ability to fill in gaps, an important amenity for commuters requiring a bicycle for both the first and last mile.

Rail vehicles may have higher capacity for onboard bicycle storage due to the size and number of cars in a trainset.



Case Studies

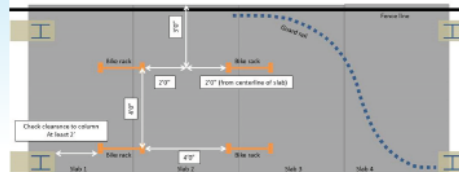
CASE STUDY



NEW JERSEY TRANSIT WESTMONT STATION

In May 2016, NJ Transit opened Westmont Station, a new commuter rail station in Wood-Ridge, New Jersey, situated on its Bergen County Line. The new station is located adjacent to a significant, residential development built on an environmentally remediated 70-acre former industrial site.

Prior to the station's opening, NJ Transit's Capital Planning Department was asked to evaluate and select the most appropriate location at the station to install bicycle racks to accommodate anticipated demand while the adjacent commuter parking lot was under construction and to serve future needs. Capital Planning fulfilled this request by conducting a site visit to evaluate the site and perform a conditions assessment. The proposed bike rack locations were identified based on proximity to platform access points, pedestrian pathways and other considerations, including weather protection, lighting and camera security. After Capital Planning determined the preferred location for the bike racks, a sketch was prepared showing the racks' location. Spacing recommendations were included to facilitate full usage of all racks. The sketch was circulated to NJ Transit's Stations and Maintenance team to confirm that the rack placements would not conflict with station maintenance needs, and subsequently to the construction management team for installation.



Ultimately, four bike racks were installed beneath the main stairway leading up to the station's pedestrian overpass. The location under the stairway was chosen primarily for its convenient location (equidistant from the stair and elevator entrances) and protection from the elements. It is also close to the pedestrian pathway but does not obstruct it. The selected location has adequate lighting and security cameras for security.

The racks are standard-size staple racks with a crossbar and were ordered previously in bulk at a cost of approximately \$140 each. For installation at Westmont Station, four racks were taken from storage and delivered onsite to the construction management team.

One year later, the site selection appeared to have been successful, as the racks are being used nearly to capacity. The photo below was taken in August 2017. As of that date, the parking lot had been completed and made available to customers, and the bike parking in this location continued to be heavily used.



CASE STUDY



LA METRO BIKE HUB

Metro Bike Hub is the name of LA Metro's program offering high-capacity bike parking in a controlled access, secure facility to support bike trips to and from key transit stations. Metro also manages over 800 bike lockers throughout the system. Where bike locker demand is high, the Metro Bike Hub technology and functions including access control, registration, user monitoring and interoperability will accommodate for retrofit to self-serve shelter designs.

Metro opened its first location in 2015 at the El Monte Transit station, which provides the flexibility to operate as self-serve bike parking and offer staffed services. Staffed hours are limited to test the business potential of bike commuter retail services. The Hollywood/Vine Metro Bike Hub opened in the spring of 2017 with similar operations. Both locations are designed within storefront retail space of approximately 1,000 square feet each. A third Metro Bike Hub location opened in the fall of 2017 at Union Station, which is designated as a "flagship" location operating out of the LA region's transportation hub. A fourth location at Culver City is scheduled to open later in 2018, which will accommodate 64 bikes. Both Union Station and Culver City are designed as free-standing facilities, with separate areas for bike retail/repair services.



These initial locations include staffed services as a strategy to offer face-to-face support and to educate transit patrons about bicycling. The locations evolved through leveraging various opportunities associated with financial support from station improvements, Metro joint-development property and grant programs emphasizing active transportation to help address needs at stations with high demand.

	Bike Capacity	Staffed	Approximate Tenant/Construction Improvement
El Monte	56	7 to 11 a.m. weekdays	\$635,000
Hollywood/Vine	64	7 to 11 a.m. weekdays	\$560,000
Union Station	192	8 a.m. to 6 p.m. weekdays, 10 a.m. to 6 p.m. weekends	\$2.5 million

Metro selected a vendor that provides access control, secure bike parking management and retail services for the El Monte, Hollywood/Vine and Culver City locations. The same access control and secure parking management is used at Union Station to allow interoperability. However, the bike retail and repair shops at Union Station are negotiated through a lease with a separate company. As Metro tests these operating models, it will allow for flexibility to support ongoing operations and provide staffing at key locations. With additional locations planned and opening, Metro Bike Hubs will offer more than just secure bike parking; they will also act as venues for access to mobility resources.

Customer registration for secure parking involves a carefully reviewed application process that includes photos of the applicant/user, state-issued license/ID card and bicycle(s). Memberships can be purchased annually (\$60), monthly (\$12) and weekly (\$5), with discounts available for qualified individuals (seniors, students, Medicare recipients, etc.) Membership provides access to and use of all Metro Bike Hub locations. Free bike clinics are also offered to the public to educate the community about bike commuting, riding skills and repair tips.



TAKEAWAYS



Build a dataset

Know What
Tools you have

Work together!

Context is Key

Think like a
transit
customer

Educate
Internally &
Externally

Be a change
agent...

